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Letters to the Editor

Prevalence of anticardiolipin and antinuclear antibodies in an elderly hospitalized population and mortality after a 6-year follow-up

SIR—The prognosis linked to anticardiolipin (aCL) positivity in an elderly population is not known. Studies of healthy elderly people give conflicting reports [1, 2] but two recent studies did not find a significant age-related increase in aCL antibodies [3, 4]. The discrepant results observed in aCL prevalence are not only due to differences in subject selection but also to the various methods used [5]. The situation is different in frail elderly subjects where a prevalence of 18.7% was recently found [4]. Here, we report a study in which unselected elderly sick patients were included. The relationship between aCL and clinical manifestations was evaluated, a comparison with antinuclear antibodies (ANA) prevalence determined and an analysis made of whether the presence of aCL is associated with survival after 6 years.

Screening for aCL and ANA was performed in 192 consecutive patients (133 women and 59 men, aged 70–99) admitted to a hospital geriatric unit between July 1989 and March 1990 for various diseases. There were no exclusion criteria. Diagnosis and ingestion of drugs at the time of admission as well as present or past histories of venous and thrombo-embolic diseases, cerebral or coronary ischaemic events, cardiac valvular abnormalities, infections, malignancies and thrombocytopenia were recorded. No patient had systemic lupus erythematosis or features of other connective disease. At 6-year follow-up, a survival analysis of the outcomes of aCL-positive patients as compared with a sex- and age-adjusted Geneva control population was performed ($n = 8104$).

Blood samples were obtained on admission. aCL (IgG and IgM isotypes) was measured by ELISA. IgG and IgM aCL concentrations are expressed in GPL and MPL units, respectively (where 1 unit represents the binding activity of 1 μg/ml of affinity purified aCL antibody), and cut-offs for positivity for IgG and IgM isotypes were set at 5 GPL and 3 MPL [6]. Depending on aCL levels, samples were classified as low (< 20 GPL, < 10 MPL), medium (20–50 GPL, 10–30 MPL) or high positive (> 50 GPL, > 30 MPL). It is important to report the titre together with the isotype: IgG isotypes are more often associated with clinical complications than IgM. ANA were measured by immunofluorescence with Hep-2 cell line cultures. A 1/160 titre was considered to be positive.

aCL was found in 21 patients (10.9%), 15 women (11.3%) and six men (10.2%). The sex distribution of positivity in this elderly population is different from that in a younger population, where female aCL positivity is prominent. Sixteen (10 women and six men) had IgG, while six (all women) had IgM (one woman having both isotypes). ANA were found in 61 patients (31.8%), 48 women (36%) and 13 men (22%). In 35 patients the titre was 1/160, in 12 it was 1/320 and in 14 it was higher. Only five patients were positive for both aCL and ANA. Strokes and cardiac valvular abnormalities were more frequent in aCL-positive patients. When three age-groups were considered (70–79, 80–89 and 90–99 years), the prevalence of aCL decreased (17, 10 and 7% respectively) whereas the prevalence of ANA increased (22, 32 and 42%). However, due to the relatively small number of patients, no statistical significant difference could be demonstrated (χ^2 for trend 2.3 for aCL and 3.42 for ANA, $P > 0.05$). For neither autoantibody was any significant association observed after splitting the data by sex.

The most interesting (and unexpected) finding was that changes in aCL prevalence with age showed the opposite pattern than that of ANA: although statistically not significant, the lowest prevalence (7.5%) was observed in the 90–99-year group. It was therefore tempting to postulate that aCL antibodies were associated with disorders that, because of their high morbidity and lethality, would account for the decreased prevalence in old age. However, during the 6-year follow-up period there was no statistically significant difference in survival between aCL-positive patients and an age- and sex-adjusted Geneva population. At least two subsets of aCL exist, a pathogenic one and a non-pathogenic one [7]. At the time of the study no measurements of anti-β2 GP1 or other antiprotein–antiphospholipid antibodies were performed. It is possible that the sum of two opposite trends (a decrease of pathogenic aCL and an increase of non-pathogenic aCL) could explain why, despite the tendency to decrease with ageing, the prevalence of aCL remains higher than that observed in the young population.

This study indicates that ANA and aCL are frequent findings in sick patients admitted to a geriatric hospital. aCL *per se* did not seem to be linked with a decrease in survival but a more precise characterization of the various types of aCL should be performed before inferring their prognostic significance.

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Inappropriate acute admissions from nursing and residential homes

SIR—This winter period we have seen an increased number of acute admissions to this district general hospital, and this seems to have been the case throughout many units in the UK. A proportion of referrals coming from nursing homes and, to a lesser extent, residential homes in the area seem to be inappropriate. We have recently completed the first stage of an audit looking at admissions from nursing and residential homes to the acute medical unit in May and June 1996.

A similar project has been performed in Falkirk and District Royal Infirmary (Age Ageing 1995; 25 (suppl. 1): 12). Of the 42 admissions to that hospital over 6 months from nursing homes, 13 were deemed inappropriate: six patients requiring nursing care only and five patients who died very soon after admission. They have now introduced admissions guidelines, with some benefit.

The data for our audit were taken from the case mix system. Of 2698 acute admissions to the medical unit, there were 297 admissions from nursing and residential homes (11% of the total). We were able to retrieve 170 patients' case notes and from these reduced the figure for admissions from nursing and residential homes to 111 (by excluding patients who were admitted as day cases or outpatients, those who were admitted to and discharged from the medical assessment unit on the same day, those who were admitted to non-medical specialties and those admitted outside the allotted dates).

Of the 111 admissions, 33 came from residential homes. Fifty-six nursing homes and 18 residential homes were represented. The highest number of admissions from a single residential home was eight and the highest number from a single nursing home was six. Seventy-four general practitioners had requested these 111 admissions, the most from a single general practitioner being six. The length of stay varied from 1 day to over 20 days. Twenty patients had a stay of 24 h or less: five of these were transferred to a community hospital, five died and 10 returned to the nursing home. There were seven patients with a length of stay of 2 days: one of these went to a community hospital and two died. Of the seven who stayed 3 days, four died.

Those who died within the first 3 days usually died from a terminal event on a background of chronic neurological disease—for example, bronchopneumonia in patients with multiple strokes, dementia or Parkinson's disease. Twenty-two patients were discharged back to the nursing home within 3 days. These had fairly trivial or self-limiting conditions—for example, drowsiness related to excess neuroleptic drugs, mild dehydration, self-limiting angina, seizures in patients known to have epilepsy, constipation causing abdominal pain, back pain and mild chest infections. Those patients who transferred to the community hospitals (seven in the first 4 days) usually had problems which warranted further medical input.

Therefore, the King's Mill Centre had more admissions to acute medical wards from nursing and residential homes than did the Falkirk and District Royal Infirmary.

Admissions from residential homes were probably more appropriate as nursing care is not available there. We feel that some of the admissions from nursing homes were inappropriate. These include most of those of patients who died within 3 days, of patients with self-limiting conditions and of patients for whose care a community hospital bed would have been more appropriate.

We have discussed with officers of the hospital trust how we might take this initial phase further. We considered repeating the study prospectively, drawing up some guidelines for admissions to medical wards or creating an out-reach team involving a geriatrician and